

Annual Report

2015



**Afghanistan National Horticulture
Development Organization**



31 December, 2015

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Picture 1 – A meeting of Citrus Promotion Group in Jalal Abad, Nangarhar



Picture 2 – Apricot traders' session for selection of best commercially viable varieties

ACKNOWLEDGEMENT

I would like to express my deepest appreciation to all those who have provided ANHDO the possibility to not only successfully complete the planned activities but go beyond them during the 2015. I give special thanks to our donors (EU and AFD) who financially supported our projects.

Furthermore I would also like to acknowledge with much appreciation the crucial role of the staff, who dedicated their time and talent in 2015 to our organization (ANHDO). Together, we will take Afghanistan National Horticulture Development Organization (ANHDO) to new height of success in 2016.

Last but not least, many thanks go to ANHDO Board Members and Senior Management, who have invested their full efforts in guiding the team in achieving the goal. I also have to appreciate the guidance given by donors, members, partners and other stakeholders that have improved our performance during the year.

A special thanks to PHDP/II team, who provided a lot of technical, managerial assistances to ANHDO. By their efforts ANHDO could have many significant achievements during the 2015.

Best Regards,

Najibullah Enayat
General Manager
Afghanistan National Horticulture Development Organization - ANHDO

March 2016

ACRONYMS

ANHDO	Afghan National Horticulture Development Organization
ANNGO	Afghan National Nursery Grower Organization
AAIDO	Afghan Almond Industry Development Organization
AFD	Agence Française de Développement
BMP	Best Management Practices
BoD	Board of Directors
CPN	Certified Production Nursery
CTV	Citrus Tristeza Virus
CGG	Citrus Grower Group
EU	European Union
FH	Field Horticulturist
FM	Field Manager
GoA	Government of Afghanistan
GA	General Assembly
GA3	Gibberellic Acid
GRPG	Grape and Rasiin Producer Group
HVP	Horticulture Value-chain Project
HDTP	Horticultural Development Transition Project
IAO	The Istituto Agronomico per l'Oltremare (Overseas Agronomic Institute, Florence, Italy)
IDCO	Italian Development Cooperation in Afghanistan
MAIL	Ministry of Agriculture, Irrigation and Livestock
MoU	Memorandum of Understanding
MSN	Mother Stock Nursery
MC	Mercy Corps
NGA	Nursery Growers Association
NHLP	National Horticulture and Livestock Program
NNGA	Nangarhar Nursery Growers Association
NVDA	Nangarhar Valley Development Agency
PBTL	Plant Biotechnology Laboratory
PHDC	Perennial Horticulture Development Center
PHDPII	Perennial Horticulture Development Program
RI	Relief International
ToT	Training of Trainers
VC	Value Chain

I. Who we are

Afghanistan National Horticulture Development Organization (ANHDO) is an Afghan Non-Governmental Organization established in 2009 whose mission is to enable horticulture stakeholders to improve the Afghan horticulture industry by providing technical services, upgrading capacities and promoting private -public coordination.

Our vision is to reach “a sustainable and profitable horticulture industry for a better life in Afghanistan” and our long-term objectives are to:

- Reform packaging, processing, storing and sorting system
- Ensuring product quality to meet international standards
- Help to build business linkage with potential investors, producers and buyers
- To increase the income of producers by introducing new and advanced technology
- Facilitate and coordinate efforts between private and public stakeholders in support of horticulture development
- Initiating and designing projects for promotion of good practices and standards and building capacities.

With the assistance of the European Union (EU) Delegation in Afghanistan through its “Perennial Horticulture Development Project” (PHDP II) ANHDO has been developed as an apex institution which is part of both the EU and Ministry of Agriculture, Irrigation and Livestock (MAIL) long term strategy for developing the horticulture sector in Afghanistan.

In order to formalize ANHDO’s efforts to strengthen the horticultural private sector and the partnership with Ministry of Agriculture, Irrigation and Livestock (MAIL), ANHDO signed a Memorandum of Understanding (MoU) with the MAIL in 2012. This MoU has been updated in early 2015.

II. Who are the donors?

ANHDO’s activities are supported by the European Union (EU), the Agence Française de Développement (AFD) and the Italian Development Cooperation in Afghanistan (IDCO).

III. Leadership

ANHDO is headed by a General Assembly composed of ANHDO’s members. ANHDO’s board of directors is elected by the General Assembly Members and is composed of well-qualified and committed agribusiness traders, input suppliers, horticulturists and economists.

IV. Staff Capacity

ANHDO incorporated the best horticulturists trained by the PHDP and now owns an excellent technical team of experienced national horticulturists. Moreover, having been at the center of the horticulture development in the past five years, it has already assembled an outstanding roster of international and national specialists in the various field of horticulture, ready and committed to work for and support the organization. Last but not least, the organization has carefully built the capacity of the administrative machine and has now an effective and efficient administration team.

V. ANHDO Implemented and On-Going Projects in 2015

I. Support to Afghanistan Private Sector Horticultural Development Transition Project (HDTP)

Project Name	Support to Afghanistan Private Sector Horticultural Development Transition Project (HDTP)
Donor	European Commission Kabul, Afghanistan
Contract no	DCI-ASIE/2012/295-864
Grant amount	1,298,320 Euro
Contract duration	28 Aug 2012 to 27 Aug 2015
Project status	Completed
Specific Objective	The private sector perennial horticulture (fruits & nuts) industry profitably exploits markets at home and abroad with a range of fresh and added value fruit and nut products that meets market demands of quantity and quality, and leverages the natural advantages of the favorable Afghanistan climate for production of fruits and nuts.

Table 1 - Support to Afghanistan Private Sector Horticultural Development Transition Project (HDTP)

II. Kapisa and Surobi horticulture survey

Project Name	Global Horticulture Assessment in Kapisa province & Surobi district, Kabul
Donor	French Embassy (Pole de Stabilite'), Kabul
Grant amount	30,000 Euro
Contract duration	Nov 2012 to Feb 2013
Project status	Completed
Specific Objective	<ul style="list-style-type: none">• Improve agricultural production by strengthening the value chain• Enhance the local economy by developing the food industry• Increase provision of adequate technical training• Improve access to safe drinking water for the residents of Surobi
Main activities	<ul style="list-style-type: none">• To provide an overview of the horticulture value chain• To provide SWOT analysis of the horticulture value chain in Kapisa and in Surobi

Table 2 - Kapisa and Surobi horticulture survey

III. Support to the Development of Agriculture Private Sector: Perennial Horticulture (HPS)

Project Name	Support to the Development of Agriculture Private Sector - Perennial
Donor	European Commission Kabul, Afghanistan
Contract no	DCI-ASIE/2012/295-864
Grant amount	7,336,840 Euro
Contract duration	Dec 2013 to Dec 2017
Project status	On going
Overall Objective	Contribute to the improvement of horticulture and the capacity of the private sector
Specific Objective	<ul style="list-style-type: none"> • Increase capacity of the Afghan private sector nursery industry to meet the demand of Afghan farmers. (SO1) • Adaptive research provides the technical solutions to increase productivity and value. (SO2) • Pilot demonstration of enhanced post-harvest management systems and value chain development for key perennial horticulture crops. (SO3) • A strong and profitable citrus industry in eastern Afghanistan is developed (SO4)
Implementing partners	ANHDO as Head of consortium & Relief international co - applicant

Table 3 - Support to the Development of Agriculture Private Sector: Perennial Horticulture (HPS))

IV. Horticulture Value Chain Development Project - HVP

Project Name	Horticulture Value-Chain Development Project (HVP)
Donor	Agence Française de Développement
Contract no	AFD Contract n.12/CAF10490
Grant amount	2,200,000 Euro
Contract duration	NOV 2014 to Dec 2017
Project status	Ongoing
Overall Objective	To contribute to the uplifting of horticulture (yields, quality standards, market value) and enhancement of capabilities of the private sector, through specific pilot actions in target areas.
Specific Objective	<ul style="list-style-type: none"> • Support to the Nursery Industry in a specific area (SO1) • Adaptive research to find commercially viable clones of Apricot, Pomegranate and Citrus & Post harvest laboratory activities for Pomegranate, Apricot, Citrus(SO2) • Market driven value chain study and establishment of private value addition pilots & Pilot actions to improve Pomegranate and Apricot value chain (SO3) • Support development of robust citrus industry in Eastern Afghanistan & Specific activities to improve the citrus value chain (SO4) • Enhance the management capacity of ANHDO in good governance (SO5)

Table 4 - Horticulture Value Chain Development Project – HVP

V. Pistachio project in Herat

Project Name	Pistachio Promotion Project
Donor	The Istituto Agronomico per l'Oltremare - Italian Ministry of Foreign Affairs
Grant amount	112,000 Euro
Contract duration	Nov. 2014 to July 2016
Implementing Partner	Herat Directorate of Agriculture (MAIL) & Agriculture Faculty of Herat
Project status	Ongoing
Overall Objective	Support to the pistachio value chain, training of farmers, support to the establishment of the Pistachio Promotion Group in synergy with other projects and organizations
Specific Objective	<ul style="list-style-type: none"> • Training of technicians and farmers • Technical support for the setting-up of production lines on farms and promotion of pistachio grower associations • Setting up and consolidating growers' associations • Quality test • Creating Added Value for Local Germplasm • Support to Production through Promotional Activities

Table 5 - Pistachio project in Herat

2 PROGRESS SUMMARY

ANHDO with its mission of enabling horticulture stakeholders to improve horticulture industry by providing technical services, upgrading capacities and promoting private-public coordination, successfully completed one project (HTDP) by July 2015, and continued implementation of two major projects (HPS and HVP).

Overall focus of the year 2015

ANHDO mainly focused on adoptive research activities, value chain analysis & development, citrus industry development, nursery industry development and organizational development of ANHDO as its main activities. The main focus for the 2016 will be the same activities, as it is not possible for any organization to reach its pre-determined targets in the mentioned areas within one year.

The major part of the Afghan economy is dependent on the agriculture and horticulture income. Horticulture development in Afghanistan is strongly needed. It is a long way to go and needs a lot of efforts. ANHDO will continue its activities in the aforementioned areas. ANHDO is confident about its sustainability in terms of activities, impact and financial sustainability in the future.

ANHDO submits high quality reports on the quarterly and yearly bases plus a final report at the end of the project for its donors. It also audits its account on regular basis with

reliable audit firms and the reports are submitted for the donors and other relevant stakeholders.

3 ACTIVITIES OF THE YEAR IN REVIEW

I. Value Chain Enhancement

This sub-objective is mainly designed to pilot fresh fruit value chains established and improved with enhanced harvest and post-harvest systems to raise standards for exports and home market. The following activities have been completed under this SO as follows:

a) Select pilot project partners (growers, traders) and mobilize them to form growers' groups.

ANHDO works with more than 17 producer groups throughout the program's area of operation. These groups consist of farmers organized by crop type, each with a contact person responsible for disseminating information on ANHDO throughout the group. The objective of developing producers groups is to link farmers with potential buyers, Market actors and introduce them to product quality improvement techniques, advanced orchard management, harvesting methods, marketing knowledge and new technologies, such as the use of harvesting pickers to avoid fruit and tree damage during harvesting.

The following harvesting tools were also distributed in 2015 to the producers group's members to avoid fruit and tree damage during harvesting practices:

Harvesting Tools distributed for Sweet Cherry Producer Group's Members

S/N	Items	# of items for each beneficiary
1	Aluminium Ladder 5.7M	1
2	Small Plastic basket with 2kg capacity	3
3	Fruit Harvesting plastic basket with 7 kg capacity	5
4	Fruit picking shear (Felco 310)	1

Table 6 - Harvesting Tools distributed for Sweet Cherry Producer Group's Members

Harvesting Tools distributed for Dried Apricot Producer Group's Members

S/N	Facility Name	Location (Province, District, Village)
1	Sulphur Room with 3 L x 2 W x 2 H meter(this sulfur house has the capacity of 1MT fresh apricot for 1 time)	Kabul, Paghman, Esakhil village

Table 7 - Harvesting Tools distributed for Dried Apricot Producer Group's Members

Harvesting Tools distributed for Grape Producer Group's Members

S/N	Items	# of items for each beneficiary
1	Harvesting basket	4
2	Harvesting Scissors -Felco 310 (PC)	2

Table 8 - Harvesting Tools distributed for Grape Producer Group's Members



Picture 4 – Harvesting Tools distribution for Fresh Apricot Producers in Paghman District of Kabul Province



Picture 5 – Harvesting Tools distribution for Dry Apricot Processors in Paghman District of Kabul Province

Harvesting Tools distributed for Fresh Apricot Producer Group's Members

S/N	Items Description	# of items for each beneficiary
1	Aluminum Ladder 5.7M	1
2	Small Plastic basket with 4kg capacity	3
3	Fruit Harvesting plastic basket with 10 kg capacity	5

Table 9 - Harvesting Tools distributed for Fresh Apricot Producer Group's Members

B. Conduct capacity building activities based on the FFS model to introduce best harvest and post-harvest practices to the beneficiaries.

ANHDO builds the capacity of its partners and extension staff so they can transfer harvest and post-harvest core horticultural knowledge to the farmers.

A technical training of trainers (ToT) conducted for sweet cherry, grape, raisin and dry apricot about harvest and post-harvest practices of target crops by ANHDO technical team to the ToT trainers. The trainers were selected by farmers' groups. After the training completion, the trainers were responsible to conduct the same training for the "farmer's group members" from where they were introduced to the training.

Capacity Building Training for ToT Trainers

S/ N	Name	Topic	Venue	Date / Period	Participants #
1	Grape producers capacity building	Hygienic and post-harvest best practices	Bagram	4-Jan-15	43
2	Raisin producers capacity building	Hygienic and post-harvest best practices	Bagram	5-Jan-15	51
3	Grape producers capacity building	Hygienic and post-harvest best practices	Mahmood Raqi	6-Jan-15	57
4	Raisin producers capacity building	Hygienic and post-harvest best practices	Mahmood Raqi	7-Jan-15	45
5	ToTs capacity building on Date collection techniques	ToT training for Grape, Raisin producers	HPS	28-Oct-15	8
6	Field day	Field Practical Training for Paghman Sweet cherry group producers	Badam Bagh	3-Jun-15	45
7	Sweet Cherry Groups' Capacity Building TOT	Sweet cherry ToT training	HPS	10-Jun-15	11
8	Sulfur Drying Techniques	Dry apricot by sulfur application training	Paghman	3,4/8/15	12
9	Hygieny and fresh and dry fruit processing	Food Processing and Hygienic training for Female Prune processors	Farza	28-30/8/15	20
10	Private quality control laboratory technicians	Elisa tests and preparation of chemicals	Badam Bagh	7-12 Nov 15	7
Total					299

Table 10 - Capacity Building Training for ToT Trainers



Picture 6 – Post-harvest and hygienic and safe sanitation training for prune processors in Farza District of Kabul Province



Picture 7 – Dry Apricot Training with usage of sulphur in Paghman District of Kabul Province



Picture 8 – Farmer Field School training for sweet cherry producers in Paghman District of Kabul



Picture 9 – Post-harvest best practices training for Sweet Cherry Producers in Paghman District of Kabul

ANHDO conducted Farmer Field School training for sweet cherry group to support the exchange of knowledge between farmers and ANHDO support staff. FFS members learn new harvest and post-harvest best practices, they receive modern agricultural inputs such as Harvesting shears, Harvesting basket, ladder share harvesting bags to avoid losses during harvest and share experiences to find solutions to agricultural challenges. In an FFS, one person is selected as a lead farmer who arranges classes for a group of 10 to 15 people from his village. The ultimate aim of the FFS is to improve farmers' knowledge base.

Farmer Field School Training Model

S/N	Name	Topic	Venue	Date / Period	Participants #
1	Cherry producers capacity building (PH)	FFS model training on PH best practices	2 villages, Paghman District, Kabul Province	13Jun - 07Jul 2015	18
2	Cherry producers	FFS model training on PH	2 villages, Paghman	13Jun - 07Jul	18

	capacity building (PH)	best practices	District, Kabul Province	2015	
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Table 11 - Farmer Field School Training Model

a) Value chains analyzed and described in detail including harvest, suitable packaging, cold chain and distribution

The value chain assessment for almond, prune, cherry and apricot were conducted in Kabul (Farza and Paghman districts), Samangan and Kunduz provinces during the year 2015. For doing the assessment a survey was conducted with the producers, traders, cooperatives/associations and related stakeholders of almond and dried fruits.

Grape and Raisin Producer Gropes (GRPG) has been considered as the logical next step resulting after three (3) meetings held with grape and raisin producers in Qara Bagh , Bagram and Mahmood Raqi districts of Kabul, Parwan and Kapisa Provinces respectively. The meetings aimed to discuss and identify how to promote the grape and raisin production under the program. During the reporting period, the beneficiary groups identified the members to represent them and participate in the GRPG.

ANHDO team facilitated the initial meetings, and explaining the GRPG purpose and basic responsibilities of the members in bellow pictures.



Picture 10 – GRPG second meeting in Bagram District of Parwan Province



Picture 11 – GRPG 3rd meeting in Qarabagh District of Kabul Province

The Almond value chain study was conducted during the period 15 DEC 14 to 08 FEB 15 in Balkh, Samangan and Kunduz Provinces in the north including producers, traders, cooperatives/associations of almond and dried fruits and related stakeholders involved in the sector. ANHDO team is designing specific interventions in close collaboration of the Samangan Dried Fruit Association and Kunduz Dried Fruit Cooperative and have plan to start implementation of

Analysis and description of the Sweet Cherry value chain was conducted in 2015, recommending a number of interventions to be considered for

implementation with the Fresh Sweet Cherry Growers' Group/s as per their specific needs.

In the last quarter of 2015 ANHDO started to conduct pomegranate value chain study, therefore, all preliminary steps has been completed and the actual survey, analysis and reporting will be done in early 2016.

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Picture 12 – Monthly Market Price Survey in Kabul Dry fruit market



Picture 13 – B2B meeting of prune trader with head of prune processors group in Farza District of Kabul Province

b) Marketing initiatives in domestic, regional (i.e. India, Pakistan, Central Asia, Russia) and international (i.e. EU and USA) markets with traceability, enhanced produce quality and improved packaging

During the harvesting season ANHDO technical team established linkages among the producers' groups and a national exporters. As a result of these linkages the exporter purchase 6.48 MT of Sweet cherry from Paghman ANHDO sweet cherry producers group and exported to Dubai and India.

Through its export promotion efforts, ANHDO provides assistance to traders in sorting, grading and packaging of the produce. This assistance brings product quality and packaging standards to levels required for entry into demanding international markets.

As the result of the export, ANHDO technical team did cost analysis of the mentioned commodities in INDIA and Domestic markets.

Description of the Fruit for Indian Market

Item description	Target Market	Unit	Total Exported (KG)
Species: Sweet Cherry Variety: Sweet Heart, Bing, Santana First Grade with good color, and in good stage of mature not very ripe and standard packaging each box capacity 3.6 Kg	India	Kg	4,000 Kg

Table 12 - Description of the Fruit for Indian Market

Cost Analysis in Indian Market

S/N	Cost description		Cost /Kg (AFN)
1	Farm gate price		136
2	Local transportation cost		3
3	Packaging expense	Master Box	9.15
		Clamshell	13.3
		Label	3.8
4	Labors expense		2.5
5	Kabul Custom expense		7.5
6	Cold Storage Cost (stored for total 45 days from 12 July 015 - 25 August 015)		0.1
7	Transported By	Truck	-
		Air freight	43
8	Target Market Custom Expense		35
9	4 % Commission Cost of target market		21.32
10	Total Expense / Kg		274.67
11	Sold price/Kg		533
12	Net profit / Kg		258.33

Table 13 - Cost Analysis in Indian Market

Description of the Fruit in Domestic Market

Goods description	Target Market	Unit	Total Exported (KG)
Species: Sweet Cherry Variety: Sweet Heart, Bing, Santana First Grade with good color, and in good stage of mature not very ripe and standard packaging each box capacity 3.6 Kg	Domestic	Kg	1840

Table 14 - Description of the Fruit in Domestic Market

Cost Analysis in Domestic Market			
S/N	Cost description		Cost /Kg (AFN)
1	Farm gate price		136
2	Local transportation cost		3
3	Packaging expense	Master Box	9.15
		Clemshell	-
		Label	-
4	Labors cost		2.5
5	Cold storage expense (stored for total 45 days from 12 July 015 up to 25 Aug 015)		0.1
6	Kabul Custom expenses		-
7	Transported by	Truck	-
		Air freight	-
8	Target Market Custom Expense		-
9	Commission Cost of target market/Box (30 AFS)		8
10	Total Cost / Kg		158.75
11	Sold price / Kg		200
12	Net profit / Kg		41.25

Table 15 - Cost Analysis in Domestic Market

DUSHANBE TAJIKISTAN AG-FAIR:

ANHDO provides and support Afghan traders to help them access higher paying regional and international markets for exports of their produce. On 14th October 2015, ANHDO organized a study tour to Tajikistan for 3 fresh fruit traders, ANHDO board director and ANHDO value chain manager to visit International Ag-Fair in Dushanbe, Tajikistan. The main purpose of this tour was to visit Tajik fresh fruit markets and traders to find suitable markets for Afghanistan Pomegranates and other fresh fruits in Tajikistan and Russia.



Picture 14 – Participation of ANHDO staff and National Traders in Tajikistan International Ag-Fair



Picture 15 –Afghan Fresh Fruit Traders, Tajik and Uzbek traders are discussing export of fresh pomegranate to Russian Market

KABUL INTERNATIONAL AGFAIR:

ANHDO supported its beneficiaries and partner traders to participate and exhibited their products in the Kabul International AgFair, which was held at the Badam Bagh Fairgrounds on Oct. 14th 2015. The event is held twice a year and is aimed at promoting Afghan agricultural products and facilitating access to local and regional/international markets. Farmers, traders, international buyers, governmental officials and the general public attended the event.

Participation in the AgFair enabled ANHDO to share information about its activities and offer product samples provided by beneficiaries.



Picture 16 – ANHDO staff replying the visitor's questions in Badam Bagh Ag-Fair

EXPOSURE VISIT INSIDE THE COUNTRY

For sharing the knowledge and experiences among the grape growers and raisin producers a trip arranged for a team consisting of grape growers and raisin producers representatives and ANHDO SO3 staff to Herat province ,during the trip team visited some vineyards in Shadi Jam village of ANjil district and Focus group discussion facilitated by ANHDO team and participants shared their understanding and technical experience related to grape growing and raisin drying techniques among themselves ,besides the



Picture 17 – ANHDO Team and Head of raisin producers groups in Herat Fruit Exhibition



Picture 18 – ANHDO Team and Head of raisin producers groups are visiting the vineyard in Anjail District of Herat province

team participated in grape exhibition by Herat DAIL.

INDIAN TRADE PROMOTION AG-FAIR

Indian Trade Promotion Organization organized an Ag-Fair on 18th -27th November 2015 in India. ANHDO facilitated an exposure visit to the Ag-Fair. The main purpose was to initiate market linkage between Afghan fresh / dry fruit traders and regional and international markets. During the Ag-Fair exposure visits ANHDO team accomplished the following tasks:

- Afghan traders who have attended the Ag-Fair, could find a machine for sorting and grading of fresh fruits.
- The Afghan team also could find a machine to package the dried fruit.
- Afghan traders could build a link with Indian exporters of tomato and banana.
- After having several meetings with Indian traders, Afghan team could reduce the Indian commissions' on Afghan products from 6% to 5%.



Picture 19 – Meeting between ACCI, Afghan traders, Indian traders and ANHDO to business opportunities in India



Picture 20 – Afghan traders discussing export issues in Indian Market

WORKSHOP:

ANHDO organized two days' workshop for 35 partner traders, head of producers' groups, GRPG members, relevant DAIL departments and board members. The aim of this workshop was the capacity building of participants, linkage of traders with producers, Introduction of new markets and facilitate the Cargo facilities for the exporters. The workshop topics are as follows:

- Division of all markets in five different categories
- Different market demands' / requirements
- Market channel analysis
- SWOT analysis of Afghan horticulture product and local markets
- Different value chain analysis
- Good trading concept for partner traders

- Next year's exporting plan for the international markets
- Presentation by the cargo company representatives about the cargo facilities from Kabul to the International markets.



Picture 21 – Trader's Workshop in Badam Bagh area

EXPORT PROMOTION:

ANHDO works to create a strong link between producers and traders to link Afghan produce to well-paying international markets. ANHDO high value marketing component thus improves the potential for increasing the profits of Afghan farmers and marketing firms. Interventions target higher paying domestic markets and regional export markets like India and Dubai, and International markets like Qatar, Bahrain and Portugal. Stronger linkages between Afghan traders and overseas buyers, ensure that Afghan traders are receiving the appropriate profit from the sales of their fruit

In 2015, ANHDO's marketing team worked with 4 Afghan companies in exporting of Grape, Raisin and sweet cherries to markets in Portugal, Dubai, India Bahrain, Qatar and Pakistan.

List of the companies which had ANHDO's support in its export

Fruit	Trader Name	Traded Qnt. (MT)	Destination	Market Classification	Packaging description
Raisin	Gold Star Sharq Co. Ltd.	14.82	Portugal (EU)	Export - International	Corrugated carton, cap. 6.5Kgr (with plastic bag and adhesive label)
Grape	Parwan Grape Value Chain Association (PGVCA)	34.50	Pakistan	Export - Regional	Plastic Master box, Made in India, cap. 23 Kg
Grape	Shirsha Naseer Afghan Ltd.	14.28	Pakistan/India	Export - Regional	Corrugated carton, 5 ply, cap. 7kg
Sweet Cherry	Samsor Ban Co. Ltd.	6.48	Dubai/India	Export - Regional	Corrugated carton, 3 Ply, color printed (6Xclamshells & adhesive labels)
Apricot	Amini Sadri Co. Ltd	30.24	Qatar/Bahrain/ Dubai	Export-Regional	Plastic masterbox, color printed (8Xclamshells & adhesive labels)



Picture 22 – ANHDO supports Afghan fresh fruit traders to export fruits to international market



Picture 23 – ANHDO supports Afghan trader to export raisin to international market



Picture 24 – ANHDO supports Afghan fresh fruit traders to export fruits to regional market

RAISIN DRYING FACILITIES:

Raisin drying facilities improve farmers' skills / ability to create export-quality produce, and allow producers to offer product at times when market conditions are most favorable.

This year one kishmishkhana (raisin drying room) constructed with a capacity of 5MT of fresh grape in one cycle in Bagh-e-Zaghan village of Qara Bagh district has been completed successfully by ANHDO. The owner contribution was 50% while other NGOs work on 25% contribution from the owners. Due to certain changes in the design that assure less time for drying they were willing to pay higher contribution. The improved measured were both local and technical i.e instead of wall installing meshes to the northern side and installing the automatic (wind ventilators) on the roof.



Picture 25 – ANHDO supports the green raisin producers through constructing modern Kishmishkhana

ALKALINE DRIED GOLDEN RAISIN:

During the reporting period green and golden raisin drying trainings conducted for the ANHDO targeted raisin producers groups as. This training was highly coordinated among government and NGOs working in the districts and they have asked the project to include their staffs in the future.

Green and Golden Raisin Drying Training

S/ N	Name	Topic	Venue	Date / Period	Participants #	Participants Description
1	green raisin drying new techniques	Green & Golden raisin production by usage of the potassium carbonate solution.	Bagram	24-26/8/2015	120	Beneficiaries (87) from Bagram & Kapisa incl. MAIL/DAIL staff (10), CARD F beneficiaries and staff (22), Parwan Grape Value Chain Association members (1)
2	green raisin drying new techniques	Green & Golden raisin production by Usage of the potassium carbonate solution.	Qarabagh	27-28/8/2015	16	Beneficiaries (16) from Qarabagh

Table 17 - Green and Golden Raisin Drying Training

For the training a trainer was hired from Herat grape and raisin association who had wide experiences in alkaline application. ANHDO TOTs were included in the trainings that in turn will be providing trainings to those ANHDO producers who did not participate this training. As the result of this event raisin producers have learned the raisin drying new techniques with the potassium carbonate application and are happy with result. In addition, a one page information leaflet about the raisin drying process has been prepared, printed and disseminated among the participants.



Picture 26 – ANHDO provides technical training on usage of alkaline solution for making the green raisin and reduce the drying cycle in Bagram district of Parwan Province

COOL ROOM:

ANHDO funded the construction of 2 apple climate cold storage rooms to provide farmers with the capability to store their apples until off season in Paghman district of Kabul province. ANHDO contributed 50% to the estimated construction cost.



Picture 27 – ANHDO supports the apple growers through constructing the cold room for storage of apple in Paghman district of Kabul Province

The construction work is finished and have been physically handed over to the owners. The size of the apple cool room is 6mX3.25mX3.5m.

DRIED FRUITS 2015 MARKET PRICE SURVEY:

Market survey of Almonds and other dried fruits and nuts is conducting for 2015. The regular survey is conducted in three dried fruits retails and wholesale markets in Mandavi, District #1, Kabul, Afghanistan:

The table below present overall minor price fluctuations during the past 12 months':

The overall minor price fluctuations during the past 12 months in 2015

Table 18 - The overall minor price fluctuations during the past 12 months in 2015

S/N	Produce	Verities	Weight (Kg)	Production areas	Av unit Price (Afs) in Jan 15	Av unit Price (Afs) in Feb 15	Av unit Price (Afs) in Mar 15	Av unit Price (Afs) in April 15	Av unit Price (Afs) in May 15	Av unit Price (Afs) in June 15	Av unit Price (Afs) in July 15	Av unit Price (Afs) in August 15	Av unit Price (Afs) in September 15	Av unit Price (Afs) in October 15	Av unit Price (Afs) in Nov 15	Av unit Price (Afs) in Dec 15
1	Almond	Satarbai	Kg	Samangan, Mazar, Qunduz, Logar	1050	1080	1650	1600	1620	1700	1720	1750	1500	1500	1500	1600
		Logari	Kg	Logar	1300	1550	1450	1400	1380	1600	1610	1650	1400	1430	1450	1550
		Tashqurghani	Kg	Mazar	900	1000	1000	1000	1050	1000	1020	1000	950	1000	1000	1150
		Abdul Wahidi	Kg	Mazar, Samangan	700	750	730	Not available	Not available	Not available	Not available	800	800	950	940	Not available
		Qambari	Kg	Mazar, Qunduz, Samangan	750	740	800	700	775	770	800	820	790	800	810	950
		Shokorbai	Kg	Samangan	1000	850	1000	1050	975	1000	1040	1040	1000	1120	1120	1100
		Sangak	Kg	Ghazni, Shahristan	370	310	500	650	600	625	680	650	630	700	710	700
		Amriceae	Kg	--	315	360	650	750	800	825	850	870	800	850	840	850
		Murawaj	Kg	Qunduz	500	550	700	600	610	750	870	850	850	840	850	700
		Khairudeni	Kg	Qunduz	900	850	750	800	780	Not available	Not available	Not available	700	810	800	Not available
		Shahristanai	Kg	Ghazni	550	600	550	580	700	675	690	700	710	730	700	750
2	Raisin	Shindulkhani	Kg	Kandahar	390	400	400	425	420	430	450	430	400	400	380	400
		Red	Kg	Ghazni, Shamali	110	100	125	150	175	165	200	200	180	150	160	180
		Abjosh	Kg	Kandahar, Ghazni	250	280	420	430	450	425	430	440	350	380	350	390
		Black	Kg	Mazar, Kandahar, Ghazni	180	170	200	200	200	210	230	230	210	200	210	200
		Girdak (green)	Kg	Ghazni	180	200	225	200	250	180	200	180	175	180	180	210
3	Dried prune	Ghazni	Kg	Ghazni	130	125	225	220	250	250	250	230	220	250	250	300
		Shamali	Kg	Farza, Istalif	90	100	175	180	230	225	250	200	180	180	185	250
4	Walnut	Qaghazi 1st Grade	Kg	Maidan/wardak, Paktya, Mazar, Samangan	700	700	800	775	825	800	850	850	800	650	680	720
		Qaghazi 2nd grade	Kg	Paktya, Mazar, Samangan, M/W	550	600	700	650	575	650	670	630	610	550	530	680
		Sangak	Kg	Mazar, Samangan			575	515	520	500	520	500	500	500	500	580
5	Mulberry	Safid (Khudi)	Kg	Badakhshan, Mazar, Samangan	175	195	230	300	280	275	280	250	260	250	250	280
		Sya (Ibrahimkhani)	Kg	Ghorband, Shamali	140	150	150	150	170	175	190	200	180	150	150	180
6	Dried Apricot	Chapanemak	Kg	Bamyan	500	570	530	500	485	500	520	500	610	500	530	600
		Sulfari (Ashtaq)	Kg	Bamyan, Maidan wardak	200	230	210	200	235	225	200	180	200	220	220	250
		Qaisi	Kg	Kabul	220	160	175	175	190	175	200	150	170	210	200	230
		Shakarp para (Gholang)	Kg	Kandahar	300	300	375	365	365	375	350	370	400	450	430	440
		Barga (Local)	Kg				175	135	150	175	180	150	170	200	200	200
7	Pistachios	Irani	Kg	Import from Iran	700	740	700	700	700	700	750	780	750	700	720	700
		Local	Kg	Samangan, Nimroz	1200	1120	1400	1400	1400	1300	1300	1420	1400	1300	1360	1300
8	Pine nuts	sya (Black)	Kg	Pactia, Khost	800	780	1000	1000	1000	1000	1000	1050	1020	1000	980	1000
9	Dried sour cherry	Alobalo	Kg	Takhar	150	150	160	190	180	190	200	180	170	180	170	200
10	Fig	Kandahari	Kg	Kandahar	500	530	400	400	400	375	350	370	350	380	360	420
11	Apricot seed	Seed	Kg	Ghorband, Maidan wardak	280	180	300	400	350	370	400	350	310	330	310	360

A primary value chain assessment was carried out in Paghman among apricot producers and in Sorobi among pomegranate producers; focus group discussion method was used to assess apricot and pomegranate value chains producers and their constraints. These focus group discussions were also conducted among other chain actors to identify movement channels of apricot and pomegranate.

A MoU was signed between ANHDO and a trader named Amini, to purchase fresh apricot from project beneficiaries the trader was provided the improved packages. As a result, Mr. Amini Sadri purchased 61 MT fresh arpicot from ANHDO beneficiaries to export them to Bahrain market plus 24.6 MT to Qatar and United Arab Emirates.

After several coordination meetings with Afghanistan Chamber of Commerce and Industries (ACCI), Afghan export promotion agency, Ministry of Commerce and Industry (MoCI), list of fresh fruit exporters and merchants has been prepared.

II. Adaptive Research Program

Adaptive research and technical development programs are providing the technical solutions to increase orchard productivity and superior value products to the consumer at household and national level.

a) Engage undergraduates and fresh graduates as horticulture- interns in field and laboratory research activities

14 full time and part time interns were mobilized periodically in the PHDCs as per Field Horticulturists Curator of the National Collection requests to conduct seasonal activities in order to mobilize the interns required for most of the Adaptive Research activities in the PHDCs.

b) Cross pollination program in almonds, apricot and plums have identified suitable pollinators and pollinizers for each of the major varieties

A 15 pairs of varieties were combined as part of the breeding program crosses. These included suitable combinations with new almond varieties and apricot.



Picture 28 – Cross pollination program for almond in Kunduz PHDC



Picture 29 –Fruit set evaluation of compatibility trial (Herat PHDC)

- **Rooting of clonal rootstocks for stone fruits**

The multiplication of Gisela 5 (cherry rootstock) and Farold 40 and pyro dwarf (pear rootstocks) are identified to be fairly reliable, but the production of GF677 needs more work to make the production system more secure. The transfer of these plants needs to be monitored from laboratory to field and to the production of budded saplings to ensure that reliable production systems are provided to the nursery grower.

- **Testing for winter chill requirements**

Low chill apricots have been used in the breeding of new apricot varieties. Any lines that show low winter chill requirements can be field tested in Jalalabad for the possibility of being grown in the eastern region of Afghanistan. This trial was first carried out in winter 2014-2015.

- **Testing of gibberellin treatments on marketability of Shakardara**

Many growers in Afghanistan, especially in Shamali plain, Kandahar and other areas use GA3 on seedless grape varieties such as Kishmeshi and Shondukhani for enlargement of berry size. The experiment was conducted to evaluate the effect of GA3 application on cluster compactness, quality improvement and production of Shondukhani variety of grapes in Shakardara district, Kabul provinces during April - Oct 2015. The trial was laid out in Randomized Complete Block Design with three vines per treatment, and then 3 replications (two clusters per replication from targeted vine randomly were selected).

After harvesting, and Least Significant Difference Test (LSD), the experiment shown that treatment (80 ppm GA3 at berry size 10 mm) is appropriate treatment for high yield, good quality and marketability for Shondukhani grapes.



Picture 30 – Assessment of grapes harvested from the trial of gibberellin treatment on Shondukhani grapes



Picture 31 – Effect of gibberellin on shondukhani grapes using 80 ppmt at 10mm berry size

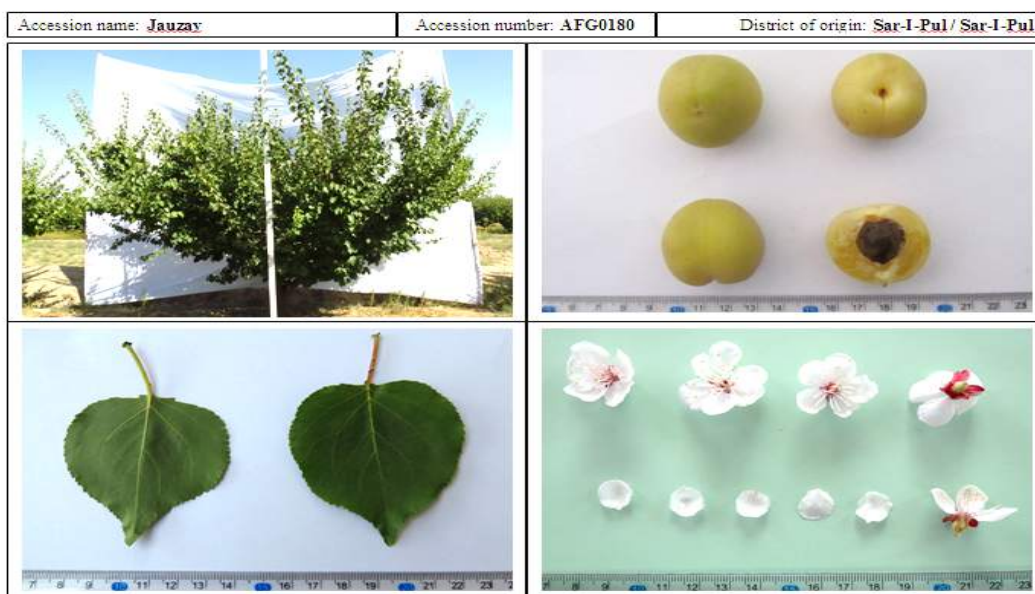


Picture 32 – Checking berry size for treatment of gibberellin on Shondukhani grapes

c) Information on self and cross pollination character is disseminate to nursery growers and orchard

- **Apricots Register**

The Apricot Register of apricot varieties for the National Collection was published with (72 accessions) and the completed volumes delivered at the end of September 2015. The first copies of the apricot Register were received and presented in Horticulture Stakeholders Workshop. 72 separate accessions are described a total number of 93 accessions are listed, including three candidate varieties not yet fully described. Apricot trader conference was conducted in Badam Bagh PHDC. More than 40 varieties of apricot were harvested from the national collection and evaluated by the traders.



Picture 33 – Sample photo of apricot tree, leaf, flower and fruit characterization



Picture 34 – Cover page of Apricot Register

- **Pomegranates Register**

The pomegranate national collection register's layout having been designed, all the portions of the register including introduction, characters of each accession and photos describing the status of the varieties are arranged.

- **Cherries (sweet and sour)**

The data on the cherries has been collected for the national register of its varieties. There are still some cherry varieties that are only in a single location, either Herat or Kabul, and the data on their description needs to be completed.

- **Plums**

The decisions regarding the varieties which can be included in the register has been made. The registration process soon will be completed.

- **The Afghan Orchard**

Progress on preparation of the manual for ANHDO orchards, entitled "The Afghan Orchard" was reviewed. The manual will be completed by February/March 2016.

d) Adaptive research into fruit characteristics, identify opportunities and constraints for the harvesting, packing, storing, shipping and processing of the different varieties and their consequent marketing potential.

- **Standardization of fruit maturity (Physiochemical analyses including Brix, acidity, hardness and color) for apples, cherries, plum, peaches, apricot and grapes.**

ANHDO with close cooperation of EU and MAIL team organized a fruit show for pomegranate marketable variety selection in Kandahar on 21st of October 2015. 19 best known pomegranate were introduced to participants in terms of their characterization.

On June 24th 2015 a stakeholder workshop was conducted in close coordination and collaboration with ANHDO-HPS SO2 team, bio-technology lab and ANHDO-HVP SO3 team to evaluate varietal characterization of 40 different apricot varieties and accessions exist in Badam Bagh national collection and as a result they selected top ten apricot varieties. Similarly a pomegranate trader's conference was also conducted on 21st October 2015 in Kandahar in close cooperation and coordination with EU funded transition project, Kandahar PHDC team and ANHDO-HPS SO2 team which resulted in selection of top ten commercially viable pomegranate varieties. The results will be shared with SO2 team and ANNGO to promote these varieties in the nursery production.



Picture 35 – Pomegranate trader's conference Kandahar DAIL

Top ten selected commercially viable apricot varieties by traders

S.N.	Apricot Varieties and accessions	Clone No,	Average price	Ranked (Grades)
3	Amiri	247	50.7	1
4	Amiri	820	49.8	2
6	Amiri	482	48.2	3
2	Amiri	821	41.2	4
14	Charmaghzi	823	38.2	5
10	Bada Ghor	362	34.5	6
24	Qaisi	207	33.3	7
17	Farahi	747	33.1	8
41	Gold Rich	1736	33	9
7	Amiri	4038	32.5	10

Table 19 - Top ten selected commercially viable apricot varieties by traders



Picture 36 – Apple tree on M9 rootstock BB

Picture 37 – Apple rootstock trial fruit evaluation BBF



Picture 38 – Apple fruit characterization in Pomology laboratory



Picture 39 – Pomology laboratory training to Kandahar PHDC staff



Picture 40 – Defining maturity stage of cherry fruit



Picture 41 – Harvesting cheery fruit sample for pomology laboratory

- **Physiochemical analyses (Brix, acidity, hardness, color and etc) for Cherries**

Physiochemical characters have been analyzed for 20 selected accessions varieties of cherries. This analyses is done when Cherries has more than 50% of dark red cherries on the tree. Yield/tree has been collected from most of recommended varieties of cherries national collection.

- **Physiochemical analyses (Brix, acidity, hardness, color and etc) for Apricots**

Physiochemical characters have been analyzed for 23 selected accessions varieties plus all Amiri accessions in Kabul Pomology lab. This analysis has been done when Apricots have reached proper maturity stage and the result can be described as maturity indices of that variety.

Physiochemical characters have been analyzed for 13 selected apple varieties at the stage of full maturity.

Physiochemical characters for the 23 grape accessions, 27 plum accessions and 19 peach accessions were determined in Kandahar and Herat PHDCs.

Optimum harvesting date window was determined for 5 cherry varieties and 5 apples.

- **Procedures and protocols have been developed to better organize and define laboratory work**

- **Grape maturity estimation in 2014-16 Kandahar & Herat**

Maturity indices for Grapes are analyzed in Herat and Kandahar PHDC. For defining harvesting interval ANHDO member visited Kandahar and Herat PHDC and trained the staff on defining harvesting times of Grapes.

e) Field testing of breeding lines of almond from crosses and open pollinated lines with release of superior varieties.

- **Planting nursery in 2014, to transplant in 2015.**

The progenies of the 2012 almond crosses in the assessment field were slow in 2014. Further selections of these potentially late flowering lines were made during the year 2015. During October 2015 ANHDO assessed the first few almond lines to verify the basis for the assessment. Several characters of the almond lines related to tree habit and tree vigor were formally recorded on purpose made data sheets.

f) Suitable combinations of imported and local varieties of different species for cross pollination.

- **Evaluation of first crosses of Afghan & imported germplasm as improvements on existing varieties of Afghan almond.**

Distribution of these new selections multiplied in the nursery at Badam Bagh on bitter almond rootstock for on farm observation trials was done in February 2015. Results from the growers will be obtained and lessons learned. First harvests are expected with just nominal amounts of fruit in 2016.

- **Use of Afghan & Imported germplasm to develop improved varieties of almond**

As trees had already been netted for crossing, the opportunity was taken to cross a range of varieties with a large seeded Afghan variety AFG0739 Kaghazi Herati. The aim was to fix the large seeded seed character into a range of Afghan varieties for further use in the breeding programmes in future years.

The results from the National Collection plots of almonds in 2015 were made available in October 2015, and these showed that the kernel weights of AFG0739 Kaghazi Herati were average or below average this year. For this reason, it has been decided not to plant out the progenies of the crosses with AFG0739 next year, but to keep the seeds in store pending further results from this variety.



Picture 42 – Thinking out branches from breeding lines



Picture 43 – breeding lines of almond in nursery

- **Use of Afghan germplasm to develop improved varieties of apricot**

The results of the first set of crosses with Amiri assessed in 2015 show that the resulting lines are tending to the small size, so backcrosses to the large fruit Amiri types should help in bringing back large fruit size to the progeny.

Experimental crosses

Test crosses were made between two Amiri types and two "Japanese" plum varieties to see if this kind of cross is simple and practical.



Picture 44 – Apricot breeding lines in breeding plot



Picture 45 – Pre-selected apricots from apricot breeding lines

Picture 46 – Sample label of apricot breeding lines

g) Initial evaluation of lines and from crosses previously made

- **Apricots future crossing programme**

The first results of the 2011 and 2012 crosses between Amiri types and imported varieties suggests there is potential for improving other types of apricots within the Afghan germplasm as represented by the national collection of apricots. In this case, the productive crosses with Amiri can be used as parents.

- **Cross pollination for checking Saqi types from Kahmard district, Bamyan province**

Nil results were obtained, as even the unbagged trees failed to set more than the occasional fruit. There may be some progress to be made by crossing Saqi types to more productive types, following the similar path to that being tried for the Amiri types

Laboratory supplies

Upon request of Jalalabad pomology laboratory ANHDO procured and delivered consumable inputs which were requested for determination of maturity indices and shelf life of pomegranate, apricot and citrus.

ANHDO has maintained close coordination with EU/MAIL transition project to support pomegranate register process. ANHDO provides financial support for pomegranate register publication. In cooperation with EU/MAIL transition, ANHDO is also supporting the pomegranate register process through recruitment of data entry interns to accelerate the process of data entry of collected data.

III. Nursery Industry Development

This sub-objective aims to assist the Afghan nursery industry and its associated organizations and institutions to meet the demand of the Afghan farmers for certified perennial planting material for increased planting of modern orchards.

1. In coordination with ANNGO, support the establishment and promotion of new Nursery Grower Association - NGA

77 Non-members joined NGAs under ANNGO supervision to produce certified saplings during 2015. 119 Inactive members were removed from NGA for not complying with the NGA regulations.

All equipment of the Kunduz Nursery Grower Association (NGA) was destroyed during the regional war in Kunduz. So office equipment such as cupboard, chairs, laptops, printer and projector plus its screen were purchased for Kunduz NGA office in September 2015. 18 new motorbikes have been procured for NGA field managers and handed over to NGA offices.

ANNGO certification scheme has been adapted and are being well implemented by the 26 NGAs in the targeted provinces (Shakardara, Paghman, Bagram, Sayed Kheil, Bamyan, Andarab, Chonghar, Imam Qutaiba, Aybak, Khulm, Umm ul Belad, Badakhshan, Takhar, Kunduz, Laghman , Nangarhar, Kunar, Logar, Pakteya, Maidan, Zabul, Ghazni, Helmand, Kandahar, Kapisa and Herat) in coordination with ANNGO.

ANHDO team in coordination with ANNGO had an awareness session with Ariana Radio for public people in order to increase public awareness of certified productions of NGAs in the targeted provinces (Kabul, Parwan, Bamyan, Baghlan, Samangan, Balkh, Badakhshan, Takhar, Kunduz, Logar, Pakteya, Laghman, Nangarhar, Kunar, Wardak, Zabul, Helmand, Kandahar, Herat and Ghazni).

2. In coordination with ANNGO, provide Certified Production Nursery - CPNs with inputs for producing and selling certified true to type saplings of recommended varieties.

600 Kg plastic bags have been procured and distributed to Nangarhar Valley Development Agency (NVDA) for certified citrus production within a green house.



Picture 47 - NVDA citrus modern nursery supported by ANHDO

All necessary greenhouse material and equipment procured and delivered to head of NVDA in Nangarhar province.

A contract for 4,358 Kg plastic bags has been signed with the three chairmen of eastern NGAs (Kunar, Nangarhar & Kunar) to produce certified citrus saplings.



Picture 38 - A private container grown nursery in Jalalabad supported by ANHDO

18 fruit and ornamental plants companies have been surveyed by filling the questionnaire forms and identified their annual productions during 2015 and will be registered with ANNGO soon.



Picture 49 – Interviewing with one of the company owners in Balkh

By ANHDO assistance the tissue culture Technician person could produce 9,452 tissue culture and transplanted in 6 PHDCs.

In December 2015, 15 Kapisa NGA members grafted their nurseries with certified buds obtained from Kapisa, Shakardara and Paghman MSNs. Kapisa MSN could sold 87670 certified bud to 21 nursery growers (9 Saidkhail NGA members and 12 Kapis NGA members). Detailed information is provided in below tables.

Grafted Kapisa NGA members

S #	Bud variety	Amount
1	Peach	20020
2	Apricot	20700
3	Plum	10850
4	Almond	13450
5	Cherry	2702
6	Apple	28650
Total		96372

Table 20 - Grafted Kapisa NGA members

sold by Kapisa NGA

Table 21 - Buds sold by Kapisa NGA

S #	Bud variety	Amount
1	Peach	36720
2	Apricot	34100
3	Plum	17000
4	Almond	9850
Total		87670

On 27th December an excursion / exchange visit was organized in close



Picture 50 – Visitors observing stool bed nursery and learning MSN pruning



Picture 51 – Visitors observing stool bed nursery and learning MSN pruning

on with ANNGO and ANHDO technical team for 16 Sorobi NGA members to Kabul. During this excursion they visited ANNGO office, Kabul Perennial Horticulture Development Center, Paghman NGA office and MSN to understand the overall cycle of certification scheme. In the second day, they visited Shakardara NGA office, MSN and certified nurseries, after that they went to the MSN and certified nurseries where they understood how to design their nurseries.

IV. Citrus Industry Development

Citrus Industry Department is designed to develop a soundly based and profitable citrus industry in eastern Afghanistan. New study on CTV strain and rootstock tolerance/resistance, give clear strategic decision making tools for citrus industry stakeholders and open more opportunities. The citrus value chain and market -links are developed in order to meet international exports - standards.

A research contribution agreement has been signed between Afghanistan National Horticulture Development Organization and Department of Agri-Food and Environmental Science - University of Florence in Italy to conduct a “Research on Citrus Tristeza virus infectivity in citrus orchards in Nangarhar Valley, Afghanistan

30 Sour orange seedlings transplanted and planted in pots inside the green house for CTV contamination trail for the coming operation.

PBTL conducted DAS-ELISA + Reverse transcriptase PCR on collected samples. The preliminary results indicated that there are 4 positive and 23 suspicious CTV infected trees out of 900 collected leaf samples; therefore, PBTL technicians in cooperation with ANDHO conducted the second sample collection campaign from suspicious and infected trees. The result after the second round testing of suspicious samples shows that only five of them are positively infected with CTV and remaining trees are free of CTV.

ANHDO also supports citrus processing companies in terms of provision of small processing machinery, packaging and promotion; therefore, a market research study was organized for the ANHDO value chain manager and ANHDO post-harvest officer to Pakistan. The purpose of this study was to visit Peshawar Agriculture University in order to check the existing citrus processing equipment available in that university. As a result ANHDO could start working with Gift to Zest and Khalel Rehan fruit processing companies for the technical guidance on post-harvest (processing techniques), packaging, labelling and marketing.



Picture 52 – Field day organized for citrus growers in PHDC-JAL ANHDO



Picture 53 – Sanguinello sweet organze (accession # 7007) the recommended citrus varities



Picture 54 – NVDA citrus nursery under construction

a) Citrus value chain is analyzed, focusing on current industry commercial production capacity and its potential

1036 citrus growers and 4 NVDA citrus farms have been surveyed in three provinces of Eastern Afghanistan (Nangarhar, Kunar and Laghman). The survey data has been analyzed by an International Consultant and the report has been drafted.

To enhance linkages, exchange business ideas and create a better understanding among the producers, traders, and fruit processing companies, HPS and HVP SO4 teams organized a business to business (B2B) meeting session among three processing companies (Mehan Ferdaos, Khalel Rehan, and Gift to Zest), and over 13 citrus producers and traders. As a result of this B2B meeting 5 citrus producers and traders signed fresh citrus (lemon) contract with Mehan Ferdaos citrus processing company.

In close coordination with Plant Biotechnology Laboratory (PBTL) of Badam Bagh Kabul, 900 citrus leaf samples from 10 citrus commercial orchards have been collected. These samples were properly collected from Bitter/Sour orange, Sweet orange and lemons and submitted to PBTL for further process

b) Commercial size citrus orchards (at least no. 12) established with certified saplings of marketable varieties

As ANHDO does have not financial means to directly work toward meeting the target but still it has played its major role as technical assistance i.e. motivating businessmen to invest on establishing commercial size citrus orchards using ANNGO certified planting material from the recommended new citrus varieties.

c) ANNGO and its citrus related NGAs members meet the Afghan citrus industry needs for certified citrus saplings, with HPS support.

In order to assist the nursery growers to expand their market, with the support of PHDC-JAL, ANHDO could prepare list of highly recommended marketable citrus varieties to meet market demand. Here is the list of those varieties:

- Orange “Citrus sinensis (L.) Osbek” - Variety: Sanguinello Moscato Cuscuna)
- Orange “Citrus sinensis (L.) Osbek” - Variety: Moro
- Orange “Citrus sinensis (L.) Osbek” - Variety: Navelina
- Orange “Citrus sinensis (L.) Osbek” - Variety: Navelina VCR
- Orange “Citrus sinensis (L.) Osbek” - Variety: Newhall
- Orange “Citrus sinensis (L.) Osbek” - Variety: Lane Late
- Mandarin Group “Citrus reticulata, nobilis, deliciosa & related” - Variety: Clementine Hernandina
- Mandarin Group “Citrus reticulata, nobilis, deliciosa & related” - Variety: Clementine Di Nules
- Mandarin Group “Citrus reticulata, nobilis, deliciosa & related” - Variety: Avana Apireno
- Lemon “Citrus × limon L. Burm.f” - Variety: Femminello Siracusano
- Lemon “Lemon - Citrus × limon L. Burm.f./ C. meyeri Y. Tan.” - Variety: Meyer & Tajiki

d) Awareness campaigns promoted best industry practices covering the broader citrus industry related stakeholders.

Awareness campaigns to promote best industry practices to citrus industry has been conducted by ANHDO through using different media such as brochures, TVs, Radios, Facebook, and etc. which are as follows:

- Seven workshops have been conducted during 2015 to do the 2015 Citrus Value Chain Assessment.
- Two meetings have been held to give awareness about PHDC and provide linkage to the PHDC during 2015 with the Citrus Growers.
- Seven workshops were conducted with the Citrus Growers with the following topics during the 2015:
 - ✓ Program introduction to the 20 Citrus Producers
 - ✓ Importance of value chain for the 18 growers
 - ✓ Citrus Value Chain for the 20 growers
 - ✓ Grafting Methods for 79 growers
 - ✓ Citrus Grafting and General Information on Certification Scheme for the 31 NAEC University students

- ✓ Capacity Building for 25 MC SAGAL Project staff
- ✓ Orchards establishment with certified citrus saplings for 60 NHLP extension workers and lead farmers
- ✓ Afghanistan citrus VC-Introduction for the 15 citrus stakeholders
- 10 traders has been Interviewed to select the traders for the Citrus Grower Group.
- An introductory meeting has been done for 14 traders to introduce Citrus Producers and Traders
- Two Information booths has been arranged during the 2015 for the 483 Citrus Growers for the following Topics:
 - ✓ Planting, saplings, and general advise on orchard establishment for 300 growers during Feb - March 2015
 - ✓ Sapling selling season Feb - March 2015 for 183 growers
- Four Awareness campaigns on Nangarhar and TOLO TVs have been conducted on the following topics:
 - ✓ Growing citrus in East +Live show (Q&A session)
 - ✓ Sour orange market decline reasons
 - ✓ Planting saplings and how to know good quality saplings
 - ✓ Citrus orchard management practices +Live show (Q&A session)
- Six Radio awareness program (two on Nangarhar Radio and four on Islah Ghaq Radio) have been conducted during the 2015 on the following topics:
 - ✓ Introduction to the Citrus varieties and showing result of citrus varieties for comparison reason
 - ✓ Main problems in Citrus Commercial Orchards in the eastern region
 - ✓ Citrus seeding Nursery establishment with improve techniques
 - ✓ Citrus orchard training and pruning techniques
 - ✓ Proper inter-coping in citrus orchards
 - ✓ Fertilizer application (chemical and animal manure) proper time and amount in citrus orchard
- The Taste of Eight varieties of the citrus has been tested by 10 traders, growers and customers.

e) Citrus Grower Group established and supported with long term organizational arrangements potentially leading to the establishment of a Citrus Growers Association.

In 2015 the Citrus Growers Group was established, which includes 15 members from different areas of the Nangarhar province. All the members are registered with ANHDO office and ID numbers have been issued for each individual members.

f) Permanent coordination between private & public stakeholders is assured by consolidation and support of the Citrus Promotion Group (CPG).

Five Citrus Promotion Group meetings are conducted and chaired by ANHDO office in Nangarhar Province. The key partners attending the meetings are 'ANHDO, ANNGO, PHDC-JAL, MAIL/DAIL, NVDA, PBTL, NHLP and RI. The main topics under discussion in this meetings were:

- ✓ CTV Campaign planning
- ✓ Introduction of the project and its activities
- ✓ Citrus MSN updates
- ✓ Citrus bud wood sources other than MSN
- ✓ Study tour (CTV)
- ✓ CTV progress report presentation
- ✓ Introduction of the highly recommended varieties of the Citrus
- ✓ Improving the citrus MSNs
- ✓ Introduction of the new tactics for raising container grown Citrus saplings
- ✓ Citrus value chain analysis (main findings and recommendations)
- ✓ Study tour to Pakistan Citrus Pack House (Findings and Recommendations)
- ✓ HPS logical framework revision
- ✓ Establishment of a citrus grower group
- ✓ Support to citrus NGAs with Plastic Bags
- ✓ Establishment of Citrus Commercial Orchards



Picture 55 – Practical training organized for Nangarhar University



Picture 56 – Sour orange leaves sample collection for CTV research

V. Organizational Development of ANHDO

IN 2015, ANHDO has decided to put efforts towards improving its organizational functioning as well as the governance of the organization through the creation of an Organizational Development (OD) Department.

a) General approach/ strategy for ANHDO institutional development

Several individual and collective meetings were held at the beginning of the year to clarifying the scope, objectives, priorities and requirements of ANHDO in terms of Organizational Development. This initial work has enabled the OD Department to develop a structured approach, and methodology for supporting ANHDO's organizational development and improving its governance.

b) Implementing an initial organizational assessment of ANHDO

Based on an extensive desk review of ANHDO internal documents and exploratory interviews with Board members, ANHDO General Manager and staff members, as well as with PHDP staff, it was possible to assess the level of the "current state of affairs" of the organization in terms of organizational development and to provide recommendations about how to solve the main organizational issues identified. The results of this assessment were formally presented and discussed with ANHDO Board of Directors and General Manager during a workshop held on 3th March 2015.

c) Setting prioritized organizational development goals

A list of prioritized organizational issues to be tackled was presented to the Board members. During a workshop held on March 6, the Board members approved this list and discussed the rank of each proposition to come up with a final prioritized list of issues.

d) ANHDO Organizational Development 3-year work plan

Based on the prioritized list of organizational development issues validated by ANHDO Board of Directors on 5 March 2015, an Organizational Development work plan was developed and approved by ANHDO board members and General Manager during a meeting held on 29 April 2015.

e) Development of an integrated organizational structure for ANHDO.

A new organizational structure for ANHDO was designed to streamline the organization's main operational functions in order to make it more transparent to internal and external stakeholders, and more efficient in terms of management. The terms of reference of the key departments and

positions were also developed to clarify the repatriation of responsibilities throughout the organization. This new organization chart was approved by ANHDO Board members on September 2015 but still needs to be presented to and approved by ANHDO's members during their next General Assembly.

f) Revision of ANHDO's by-laws and clarification of the roles and responsibilities of ANHDO's main leadership organs.

Capacity building activities in the area of good governance and instructions about how to revise ANHDO by-laws were provided to ANHDO Board members to help them proceed with their revision. The revised version should be fully compliant with the Afghan NGO Law and follow good governance principles. The revision of the by-law has been initiated in 2015. This work still under process and the revised by-laws should be completed during the next General Assembly in 2016.

g) Capacity Building activities with ANHDO main leadership organs to improve their capacities to fulfill their responsibilities.

- **Awareness Session:**

Two awareness sessions on "Organizational Development Approach, by-laws' revision and Organizational chart" were conducted with ANHDO Board and General Manager during the year 2015.

- **Coaching / mentoring:**

12 coaching and mentoring sessions dedicated to "Organizational Development, have been conducted with ANHDO Board of Directors and General Manager during the year 2015. These coaching/ mentoring sessions focused on various subjects and aimed to developing: Organizational Development Work Plan, ANHDO's new Organizational Structure, Terms of References for ANHDO's key departments and ANHDO's by-lw and Membership policy."

- **ANHDO Membership application to ACBAR**

ANHDO submitted membership application to ACBAR office on mid- Sep 2015. ACBAR's membership will open up a lot of opportunities for ANHDO such as: access to the most updated information regarding the legislation applicable to Afghan NGOs, training opportunities, possibility of networking and exchanging good practices with other Afghan and International NGOs operating in Afghanistan, etc. During ACBAR General Assembly on Nov 22 2015, ANHDO could successfully gain its membership.

h) Capacity Building of relevant ANHDO staff about NGO Management, proposal writing, fund raising, and good governance.

During 2015, 24 ANHDO staff were enrolled in short-term training sessions provided by Asra Consulting.

List of the training provided by Asra Consulting for ANHDO staff

No.	Subject Matters	Training Duration	Date	Location	# of participants
1	Project Management and Leadership Development	3 days	5-7 Oct 2015	Kabul	3
2	Professional Email and Report Writing	3 days	13-15 Oct 2015	Kabul	4
3	Procurement and Contract Management	3 days	24-26 Oct 2015	Kabul	5
4	Office Management and Communications Skills	3 days	8-10 Nov 2015	Kabul	3
5	Proposal and Report Writing	3 days	28-30 Nov 2015	Kabul	3
6	Project Management and Leadership	3 days	12-14 Dec 2015	Kabul	3
7	Advanced HR Management	3 days	19-21 Dec 2015	Kabul	3

Table 22 - List of the training provided by Asra Consulting for ANHDO staff

They successfully completed their training and submitted a copy of their certificate of completion to ANHDO HR office.

i) Development of ANHDO long-term strategic plan in coherence with Developing ANHDO's vision, mission and long term goals

A two day workshop has been organized to revise and redesign ANHDO's vision, mission and long term goals on May 10 and May 17, 2015 at the Seed Secretary Building in Badam Bagh, Kabul, Afghanistan. A total of 27 participants were present during the first workshop meeting and 26 during the second day. Both ANHDO members and main partners were invited to come and share their ideas with ANHDO staff and Board members about the strategic orientations that ANHDO should follow in the future. ANHDO's long term strategy plan will be grounded on these new Vision, Mission and Long-Term Goals. It will be developed in 2016.



Picture 57 - ANHDO Vision, Mission and Long term development workshop



Picture 58 - ANHDO Vision, Mission and Long term development workshop

j) Development of ANHDO membership policy.

Based on the results of an internal brainstorming with ANHDO staff members and the PHDP, the categories of member, their criteria of eligibility and the amount of their membership fees were determined and approved by ANHDO's Board of Directors. Based on the gathered data a first draft of ANHDO membership policy has been developed and was presented to ANHDO Board of Directors and General Manager during a Board meeting held on December 2.

VI. The Pistachio Promotion Program

Two pistachio nurseries have been established in Urdo Khan Research station and Herat university farms. In these nurseries a total of 1500 pistachio seedlings were produced. Among 1500 seeds, 700 pistachio seeds were distributed to the pistachio growers under IAO programs and 800 seedlings were distributed to volunteer pistachio growers in Kohsan, Karukh Guzara and Enjil districts.

A Pistachio ToT were conducted a three days training for 30 DAIL extension staff, agriculture faculty and senior students of Herat University.

400 pistachio growers were trained in six districts (Enjil, Guzara, Kohsan, Rabat Sangi, Zandajan and Kurokh) by the trained trainers.

11 pistachio demonstration orchards were established in Guzara and Enjil districts during the year 2015.

Six live TV programs has been organized on pistachio growing and production Via local TV by the name of Aser.

Two short clips regarding pistachio growing and production were developed and broadcasted by Jawan radio one for 10 minutes and second for two times at frequency of once a week for three months.

11 owners of pistachio demonstration orchards received 1 sprayer, 1 budding knife, 1 pruning shears and 1 musk and 1 glove were distributed from ANHDO during the year 2015.

Technical advices regarding “the best orchard practices” were provided to newly pistachio demonstration orchards owners in Guzara and Enjil districts.

One day field visit was organized for 50 growers, DAIL staff, agriculture faculty staff/ and students.

One study tour was organized to Pistachio commercial farm in Kandahar for DAIL staff, agriculture faculty staff and pistachio farmers.

A 10 days study tour has been organized to Italy for agriculture faculty staff and ANHDO staff and visited the farm, nurseries and processing facilities.

A short manual on pistachio nursery and orchard layout was develop and was published 500 volumes. The pistachio manual is distributed to relevant stakeholders such as growers, DAIL extension workers, NGOs and others.

Two PPG meeting were conducted and more than 28 representatives from DAIL, nursery growers, pistachio growers, pistachio traders, and processors, exporters, NGOs and government had participated.

Participation on agriculture sector meeting, Ag-Fair and other events related to the agriculture/ horticulture.

Strong coordination among DAIL, Herat University and relevant stakeholders involved in Pistachio activities in Herat province is established.



Picture 59 – Pistachio sapling in a nursery in Herat



Picture 60 – Orchard owners are designing orchards for Pistachio

4 CHALLENGES

- After the training, most of the producers forget or do not value the good practices to apply in their vineyard management, so they need continued monitoring, mentoring and refresher training for a longer period of time.

So, one or two times training and capacity building cannot be sufficient for them.

- ANHDO Team planned to conduct shelf life trial on different species of fruits in Kabul PHDC pomology laboratory but due to lack of cold storage facilities this activity was not carried and the plan postponed for 2016.
- Lack of sufficient production of certified saplings for establishment of commercial orchards.

5 SUCCESS STORY

Issue: Mohammad Qaseem is a farmer living in Sayad village of Andarab district, Baghlan province. He financially supports his family through working on one Jerib of land owned by another person (Ghulam Sakhi). Pretending that they'll earn more, they cultivated hashish for several years. This way, they'd earn 20,000 Afs (from 2.5 Kg hashish) which barely was equal to cultivation expenses. Hashish cultivation had ruined his reputation among his villagers and they didn't like him for the religiously-illegal cultivation he had as more people were starting to use drugs in the village.



Picture 61 – Qaseem is selling Hashish to one of his customer

Intervention: Through ANHDO program, he was advised that certified saplings are a better alternative for cultivation within NGA regulation. Since certified saplings production was an unprecedented experience in the whole district, it was difficult for him to agree to replace hashish with growing saplings soon. After making a lot of efforts, he was finally convinced to be NGA member and start growing certified saplings under ANNGO certification scheme. He provided himself with 25 Kg Peach seeds, 20 kg Almond seeds and 10 Kg apple seeds. The



Picture 62 – Qaseem tie-up ANNGO labels on certified sapling

land owner and Mohammad Qaseem (the farmer) were not sure of what they were doing! Mohammad Qaseem adds “I was worried about the result! I didn't know what to say to the land owner if things wouldn't work well for me! But, the HPS/SO1 and ANNGO technical team kept encouraging me not to give up”. He was continuously trained on different steps of nursery management and ANNGO certification scheme to build his capacity on required skills. His farm was regularly monitored and he was advised when needed. After 2 years the certified saplings were ready to be sold! And he sold them all at his farm gate to NHLP and local customers.

Impact: After saplings were sold, he was amazed to see **BIG DIFFERENCES** appearing in his life! Everything changed for his goodness. Religiously, he was no more a sinner as he was no more cultivating Haram (religiously illegal) bushes. He's known all over the district for cultivating a new bush (fruit saplings). His people love him now and granted him a nickname of which he's proud, "The saplings Engineer". Now, he earns 750,000 Afs which is much more than what he could earn from Hashish (20,000 Afs) cultivation. He said "Compared to past, I'm a millionaire now! I not only can better support my family, but I also have some extra money". More other farmers in the district have decided to leave hashish cultivation and are highly interested to learn the cultivation methods and join NGA as members. Farmers in the district credit ANHDO/RI and ANNGO for showing them a much better alternative for cultivation. Through implementing this project, ANHDO/RI and ANNGO has built farmers' capacity, given them technical and economic support saved people's lives and assisted in bringing about a healthy society.



Picture 63 – Qaseem is showing one of certified sapling for his customer

6 COMMUNICATION AND COORDINATION WITH STAKEHOLDERS

ANHDO's projects were officially presented to the MAIL (Ministry of Agriculture, Irrigation and Livestock) in Kabul and Directorates of Agriculture Irrigation and Livestock (DAIL) in 25 targeted provinces.



Picture 64 – Introduction of ANHDO in a sectorial meeting of Balkh province by ANHDO field manager

The DAIL staffs are invited to participate in every meeting, training, cross visits, field days and site visits held by ANHDO.

Field days are organized by ANHDO's Nursery Growers Associations in the field on a regular basis. The field days are the ways to increase local people and stakeholders' awareness regarding NGA activities, plus Technical information concerning ANNGO standards, NGA

activities, certification scheme and NGA current productions. The purpose of the field days are to show and exhibit fruit varieties with appropriate names, clone numbers, mother stock nursery management, stool beds management, demo orchards management and demo fruit productions and certified nurseries to the participants.



Picture 65 – Takhar ANGA chairman is presenting ANGA activities for the participants



Picture 66 – Takhar ANGA chairman is presenting certified sapling for one of the Tajikistan representative

Mobilization meetings were held with 75 nursery growers in Kapisa (40 members) and Surobi (35 members) with close cooperation of DAILs directors. The participants were briefed with project objectives and planned activities during the meeting.

A meetings was held with ANNGO general manager, DAIL directors of Kapisa and Surobi, to set up a well-organized coordination system. Existing synergies were discussed with ANNGO.

ANHDO Kapisa field manager in close coordination with ANNGO technical team facilitated a general gathering of all interested nursery growers to obtain membership of Kapisa NGA, during this general gathering all participants agreed to establish a new NGA in Kapisa the NGA director and other board members were also selected during the general gathering.

ANHDO continuously participated in a number of MAIL/DAIL meeting at the central and provincial level and represented ANHDO in these meetings.

During the year 2015 ANHDO team facilitated participation of the producers' groups' representative in the EU Friday Bazaar and in Qarabagh AgFair that was organized by Kabul DAIL department.

7 CAPACITY BUILDING AND DISSEMINATION OF INFORMATION

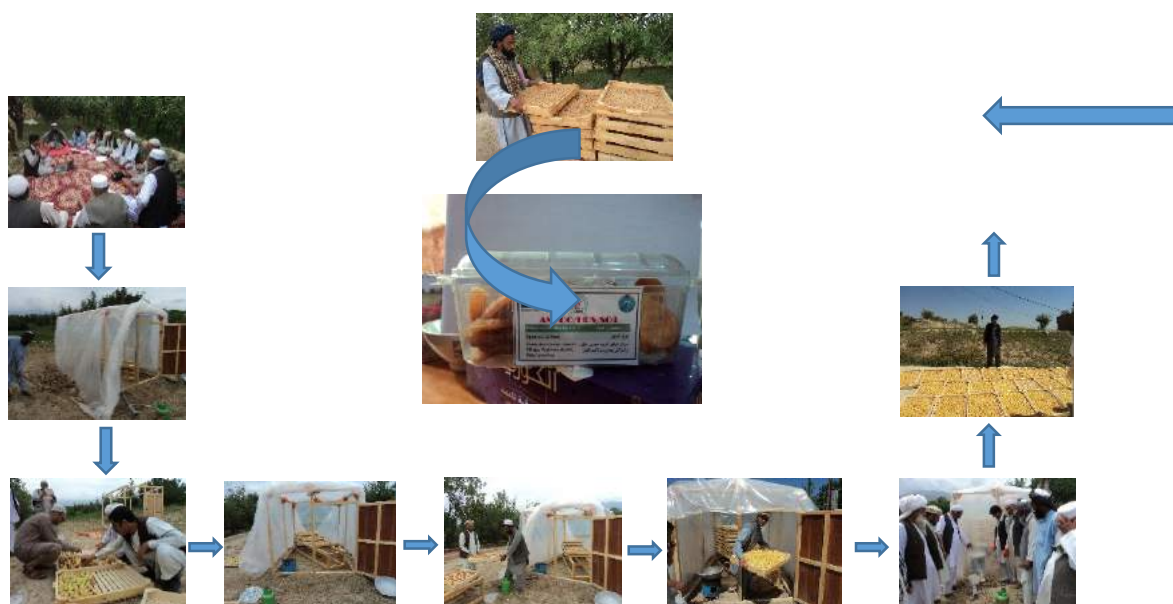
The table below summarizes the capacity building and dissemination of information activities which were carried out during the 2015 by Afghanistan National Horticulture Development Organization - ANHDO.

Capacity Building and Awareness session conducted by ANHDO during 2015

No	Training Name	Training Location	Date	Topics	Total Participants
1	Technical Training Staff	Kabul, PHDC	3 - 5 May 2014	Revision of the test, Contract Process, Project Introduction, Field Manager duties, monthly report, ANNGO Certification Scheme Document	22
2	Administrative and Technical Training	Kabul, PHDC	21- 23 Sep - 2014	NGA Problems, Administrative Issues (matrix, timesheet and monthly report), Nursery Management/ MSN Management, Certification Process, Introduction of Best Commercial Varieties	30
3	Baseline and Technical Training	Jalalabad , PHDC	29- 31 March 2015	Identification of CPN Sapling Types, Certification Documents, 2014 NGA Bud Production, Practical Pruning on Mother Trees, Baseline Survey Questionnaire, Stool bed and Rootstock Management, 2015 Action Plan, 2014 Annual Report and Certification Distribution	18
4	Baseline and Technical Training	Mazar, PHDC	5 - 7 April 2015	Identification of CPN Sapling Types, Certification Documents, 2014 NGA Bud Production, Practical Pruning on Mother Trees, Baseline Survey Questionnaire, Stool bed and Rootstock Management, 2015 Action Plan, 2014 Annual Report and Certification Distribution	14
5	Technical Capacity Building Training	Laghman NGA	11 - 13 May 2015	NGA Administrative Documents, NGA Relationship, MSN Management, Certified Nursery Support, General Problems of FMs in each NGA	16
6	IPM & Budding Process Training	Kabul, PHDC	6 - 11 June 2015	Safe Usage of Pesticide (Poster), Working Group on pest & Disease available in the field, NGA budding plan 2015, ANNGO traceability System, Payment of NGAs & ANNGO income, Major pest and disease, Discussion on quality of available mother trees, Available buds sale with species and varieties, Practical work and observation of pest and disease in the field	30
7	Technical Capacity Building Training	Herat PHDC	23-25 Aug 15	Major Pest & Disease in CPNs & MSNs, NAG Payment to ANNGO, ANNGO website and NGA new E-mail Accounts, Certified Saplings productions and sales, Bud wood distribution process through MSNs, Mother Stock Nursery Improvement, Clonal Rootstock and its importance, Group working on major Pest & Disease, ANNGO Traceability System, Group working on seasonal activities in MSNs	35
8	Technical Capacity Building Training	Kabul PHDC	13 - 15 Dec 15	Mother Trees Distribution 2015/2016, MSN, Improvement 2016, Soil Preparation and Management, Sales and Marketing, Preventive Measure Treatment for Plant Pest & Disease, NGA Improvement and Label Installation, Field Problems (MSN, CPNs and Stool bed), Field managers Performance in the field	27
9	Technical Capacity Building Training	Jalalabad PHDC	5-May 2015	Grafting (T-budding, top grafting) and Orchard Layout	30
11	ToT on Post-harvest, Hygienic and Sanitary Practices	Bagram	6-7, January 2015	Hygienic Topics (Food Borne Disease and their Types and Common Causes, Importance of Food Safety, Food Contamination Types, Food Safety Hazards and its prevention and How Bacteria Can Be Transmitted) Post- Harvest Topes (information about sorting, grading, Packaging System, Storage and Marketing)	197 Grape Growers
12	ToT on Post-harvest, Hygienic and	Kapisa	8-9, Jan 2015	Hygienic Topics (Food Borne Disease and their Types and Common Causes, Importance of Food Safety, Food Contamination Types, Food Safety Hazards and its prevention and How Bacteria Can Be Transmitted) Post- Harvest Topes (information about sorting,	353 Community Farmers

	Sanitary Practices			grading, Packaging System, Storage and Marketing)	
13	Women Capacity Building Training	Farza	28-30 Aug 2015	Fruit Processing, Hygienic and sanitary good practices,	20 Women
14	Chemical Usage Training	Bagram, Mahmood Raqi, Qara Bagh	19 Sep -17 Oct 2015	Green and Golden Raisin Drying Training	136
15	Apricot Sulfur Drying Training	Paghman	3-4 August 2015	Usage of the distributed tools, Selecting of suitable variety, Drying method, Usage of sulphur powder, Marketing, Installation of the sulphur room	10

Table 23 - Capacity Building and Awareness session conducted by ANHDO during 2015

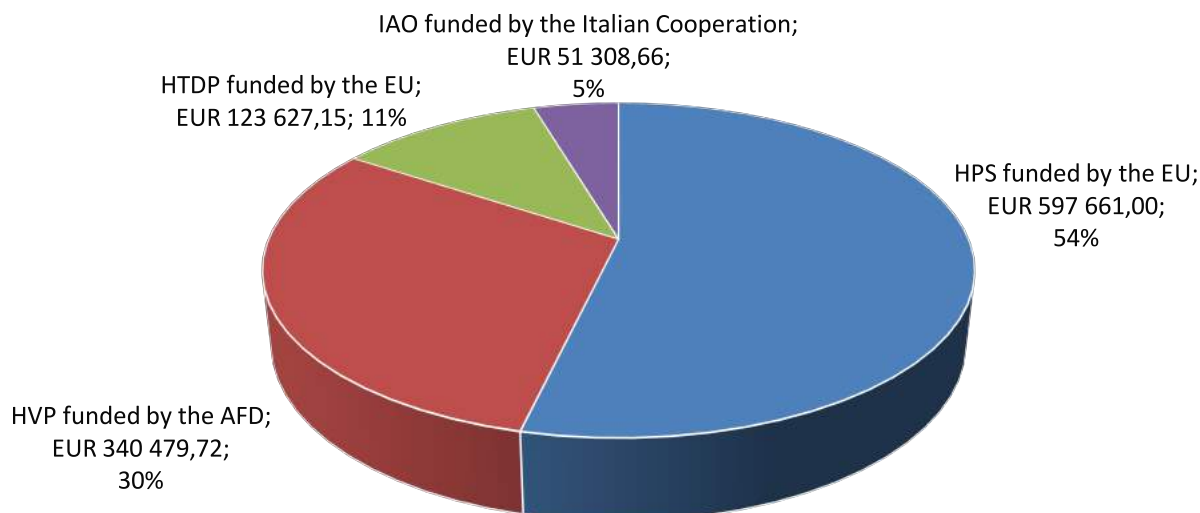


Picture 67 – Apricot drying cycle

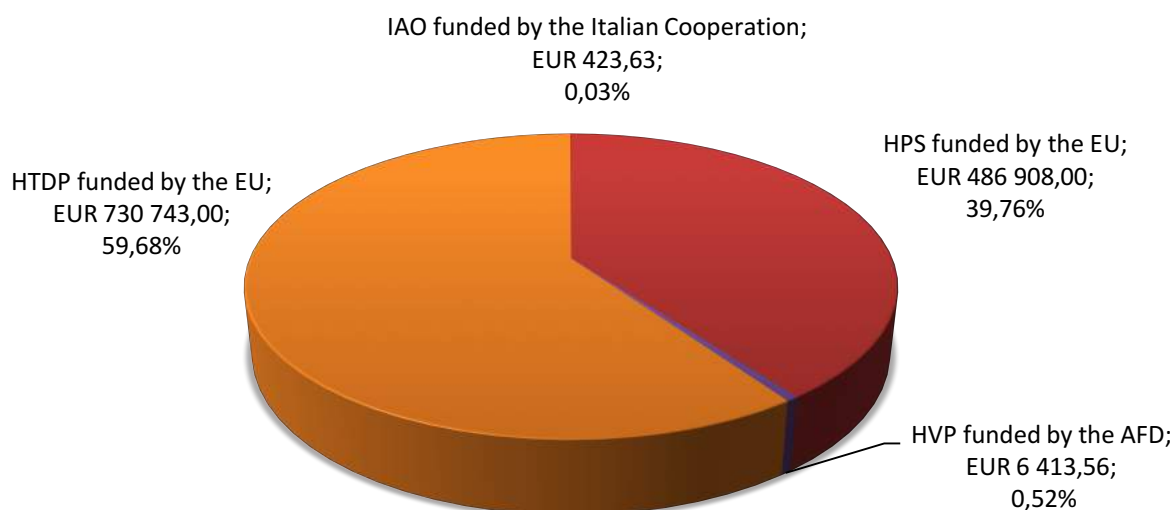
I. Repartition of ANHDO Budget by project and donor

In 2015, ANHDO budget (approx. 1,11 million Euros) remained relatively stable with only a slight decrease of 9% compared with its 2014 budget (approx.1,22 million Euros). This decrease is essentially due to the end of the HDTP project. The main changes in ANHDO's budget are related to its composition: while in 2014, HDTP and HPS, both funded by the EU, represented more than 99% of ANHDO total budget (HDTP representing almost 59,7% and HPS 39,8%), in 2015 ANHDO budget has been mainly utilized for the implementation of HPS (53,7%) and the AFD-funded HVP project (30,6%).

ANHDO 2015 Budget by projects and Donors

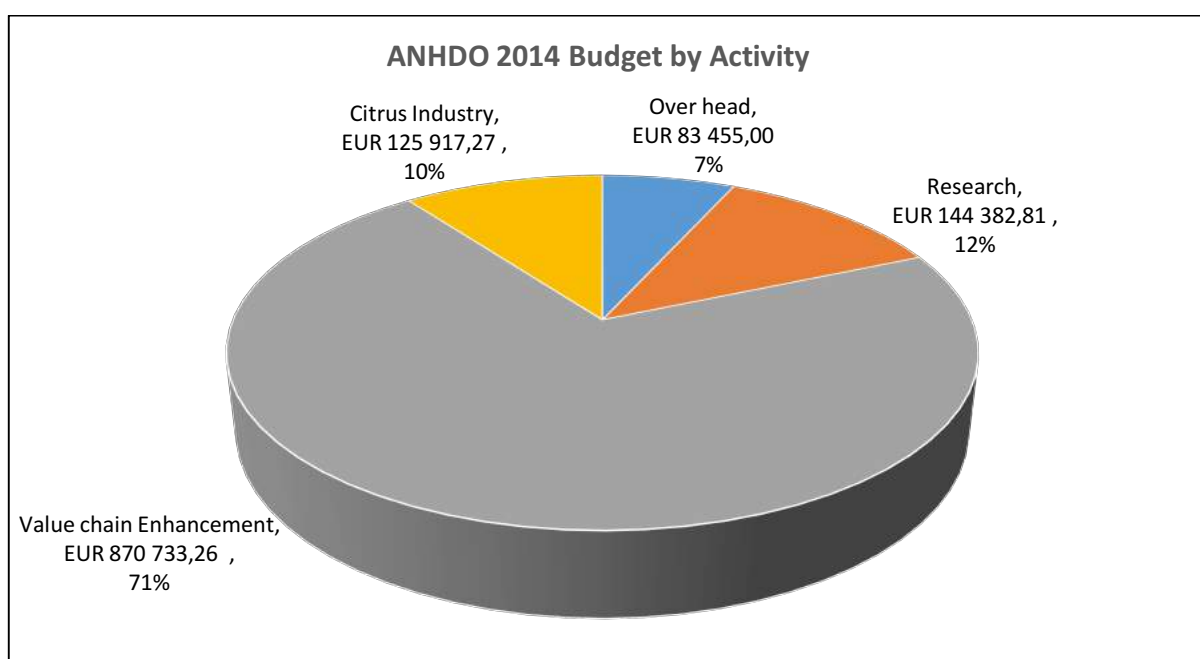
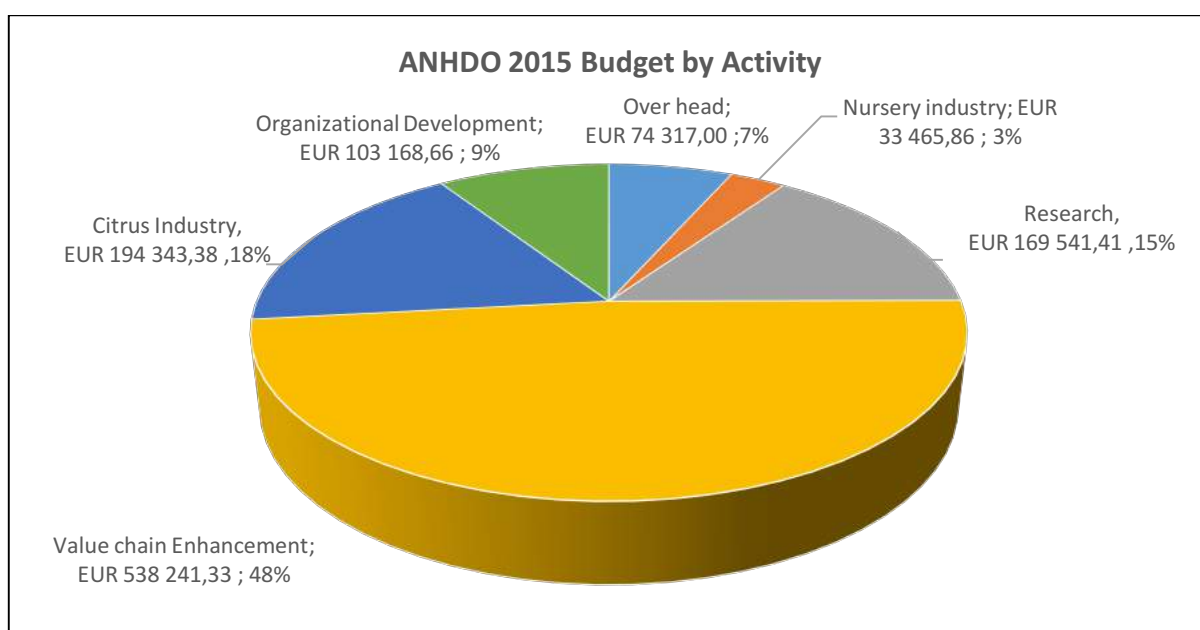


ANHDO 2014 Budget by projects and Donors



II. ANHDO Budget per type of activities

In 2015, ANHDO spent the major part of its budget on activities related to Value Chain Enhancement (representing 48% of the total budget), and the citrus industry (18%). The rest has been spent for the implementation of activities related to Research, Nursery Industry and Organizational Development (cumulatively representing 27% of the total budget) and the Over Head (7%). In comparison with 2014, ANHDO has diversified its portfolio of activities with the introduction of activities specifically dedicated to improving ANHDO Organizational functioning and Governance, and activities focused on the Nursery Industry.



9 ACTIVITY PLAN FOR 2016

- Support ANNGO to produce an Ornamentals' Documentary
- Support ANNGO to conduct three (3) nationwide radio announcements aiming to promote the development of ornamentals within its NGAs members.
- Support ANNGO to take part in six (6) national Ag fair events to promote the development of ornamentals within its NGAs members.
- Support ANNGO to publish one (1) Training Manual for the NGAs aiming to promote modern
- Support Technical Assistance to ANNGO to develop a set of phyto-sanitary standards for the ornamental plants.
- Support ANNGO to conduct a Study Tour - technical capacity building activity - in Italy for six (6) relevant participants in order to establish the technical capacity level for providing support to its members.
- Design and establish improved Kishmish Khanas (no. 1) to demonstrate enhanced production volumes of Green raisins .(7.5MT capacity annually)
- Marketing initiatives in regional markets (i.e. India, Pakistan, Central Asia, Russia) and international high value markets (i.e. EU and USA) with traceability, enhanced product quality improved packaging (100MT in total).
- Conduct nationwide awareness campaigns (no. 4) through distribution of brochures (no 10,000) to promote recommended almond varieties, IPM issues, bee pollination, best harvest practices and late frost mitigation measures among almond growers.
- Pilot fresh fruit (sweet cherry and apples) value chains established and improved with enhanced harvest and post-harvest systems to raise standards for exports and home market
- Design and establish apple cold storage structures (no. 5) aiming to prolong fresh fruit shelf life. (80MT capacity annually).
- At least 75MT of fresh fruits marketed with improved packaging by ANHDO in partnership with private sector traders.
- Marketing initiatives in domestic markets with traceability, and improved packaging (70MT).
- Marketing initiatives in regional markets (i.e. India, Pakistan, Central Asia, and Russia) and international high value markets (i.e. EU and USA) with traceability, and improved (80MT).
- Set minimum quality standards (parameters) to meet domestic market requirements and allow for potential exports.
- Set the minimum citrus fruit Quality Control parameters to meet domestic market requirements allowing for potential regional exports.
- We will develop Quality Control laboratory protocols for conducting QC trials.
- Support ANHDO to develop a long term strategy and the business plan aiming to reach a 65% self-financing level within the next 10 years.